

ABSTRACT

WATER SOLUBLE OR WATER DISPERSIBLE FLUORO-CHEMICAL SILANES FOR RENDERING SUBSTRATES OIL AND WATER RELENT

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A water soluble or water dispersible fluorochemical silane represented by the general formula:



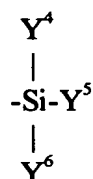
(I)

wherein X represents the residue of an initiator or hydrogen;

10 M^f represents units derived from one or more fluorinated monomer;

M^h represents units derived from one or more non-fluorinated monomer;

M^a represents units having a silyl group represented by the formula:



(II)

15 wherein each of Y^4 , Y^5 and Y^6 independently represents an alkyl group, an aryl group or a hydrolyzable group;

G is a monovalent organic group comprising the residue of a chain transfer agent;

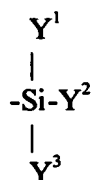
n represents a value of 1 to 100;

m represents a value of 0 to 100;

and r represents a value of 0 to 100;

20 and $n+m+r$ is at least 2;

with the proviso that at least one of the following conditions is fulfilled: (a) G contains a silyl group of the formula:



(III)

wherein Y^1 , Y^2 and Y^3 each independently represents an alkyl group, an aryl group or a hydrolyzable group and at least one of Y^1 , Y^2 and Y^3 represents a hydrolyzable water solubilizing group; or

(b) r is at least 1 and at least one of Y^4 , Y^5 and Y^6 represents a hydrolyzable water solubilizing group.

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